

552047

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
21 October 2004 (21.10.2004)

PCT

(10) International Publication Number
WO 2004/090578 A2

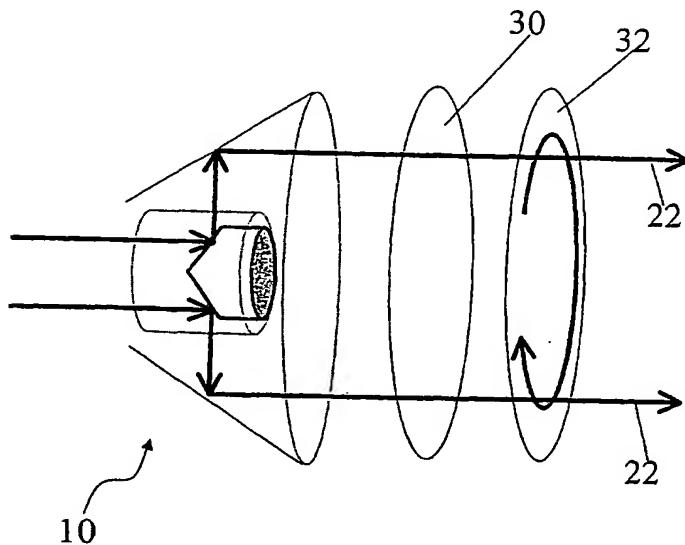
- (51) International Patent Classification⁷: G02B
- (21) International Application Number: PCT/IL2004/000307
- (22) International Filing Date: 4 April 2004 (04.04.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 155330 9 April 2003 (09.04.2003) IL
- (71) Applicant (for all designated States except US): TECHNION RESEARCH AND DEVELOPMENT FOUNDATION LTD. [IL/IL]; The Senate Bld., Technion City, 32100 Haifa (IL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): LIPSON, Stephen Geoffrey [IL/IL]; 38 Huysmans St., 34987 Haifa (IL). SHOHAM, Amir [IL/IL]; 12 Rakafot st., 34745 Haifa (IL).
- (74) Agent: MILLER - SIERADZKI ADVOCATES & PATENT ATTORNEYS; P.O. Box 6145, 31061 Haifa (IL).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR PRODUCING A LIGHT BEAM WITH SPATIALLY VARYING POLARIZATION



WO 2004/090578 A2

(57) Abstract: An apparatus for providing a light beam with spatially varying polarization. The apparatus comprises: two circumferentially curved reflectors positioned substantially opposite each other, a polarizer positioned in an optical path between the two reflectors, for polarizing light reflected from one reflector before it reaches the other. A non-polarized light beam incident along a given axis on one of the reflectors is radially reflected off that reflector, acquires predetermined polarization from the polarizer and is then reflected off the second reflector to a light beam of spatially varying polarization.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.